PATENT CLAIMS

1. System for minimally invasive treatment of a fracture of a bone (3), in particular a proximal humeral or femoral fracture, including an osteosynthetic plate (1) that has a support section (12) that can be positioned with a support surface against said bone (3) adjacent to the fracture and a fastening section (5) for fixing said osteosynthetic plate (1) to said bone (3), a fixation element (2) for fixing in a fragment of said bone (3) that was dislodged by the fracture, and a guide element (4) that can be fastened via a first connecting section (19) to said osteosynthetic plate (1) and that has a second connecting section (20) for guiding said fixation element (2), whereby said support section (12) of said osteosynthetic plate (1) has at least a first recess (15) and said fixation element (2) and said guide element (4) can be inserted into said bone (3) through said first recess (15).

2. System in accordance with claim 1, characterized in that said first recess (15) in said support section (12) and said guide element (4) are embodied such that a longitudinal axis of said guide element (4) and a tangent on the side of said osteosynthetic plate (1) facing said bone (3) are at an angle of between 50° and 70°, in particular between 55° and 65°.

3. System in accordance claim 1 or 2, characterized in that fastening means (23) are provided that hold said guide element (4) axially fast in both directions after placement into said osteosynthetic plate (1).

4. System in accordance with claim 3, characterized in that alignment means are provided that can be used to adjust and/or control the rotational position of said guide element (4) relative to said osteosynthetic plate (1).

5. System in accordance with claims 3 and 4, characterized in that said fastening means (23) include a groove (25) embodied in said first recess (15) of said support section (12) and a corresponding nose (24) embodied on said guide element (4), which can be inserted into said groove (25).

6. System in accordance with claim 5, characterized in that provided in said groove (25) is a stop (34) that is for positioning at said nose (24) and that limits a rotational movement of said guide element.

7. System in accordance with claim 3 or 4, characterized in that said fastening means (23) include a male thread embodied on said first connecting

section (19) of said guide element (4) and a female thread that is embodied in said first recess (15) and that can be caused to engage with the male thread.

8. System in accordance with any of claims 1 through 7, characterized in that said second connecting section (20) of said guide element (4) is embodied as a seat (21) in which a shaft (18) of said fixation element (2) is received in an anti-tilt and axially displaceable manner.

9. System in accordance with claim 8, characterized in that said shaft (18) of said fixation element (2) has catch surfaces (22) that hold said fixation element (2) rotationally fast in said seat (21).

10. System in accordance with any of claims 1 through 9, characterized in that it includes a bone splinter fixation element (31) that can be fixed in or to said guide element (4), in particular in a transverse bore (32) provided therein.

11. System in accordance with claim 10, characterized in that said transverse bore is arranged in said guide element (4) such that a longitudinal axis of said longitudinal bone splinter fixation element (31) and a longitudinal axis of said guide element (4) create an angle of between 60° and 100°, in particular between 70° and 90°.

12. System in accordance with claim 10 or 11, characterized in that said bone splinter fixation element (31) has a screw that has a pressure body with claws (33).

13. System in accordance with any of claims 1 through 12, characterized in that means (27) are provided for preventing rotation of the bone fragment dislodged by the fracture.

14. System in accordance with claim 13, characterized in that said means for preventing rotation include an anti-rotation screw (28) that has a head (30) and that can be placed into the dislodged fragment of said bone (3) through at least a second recess (29) in said support section (12) of said osteosynthetic plate (1).

15. System in accordance with claim 14, characterized in that said second recess (29) has a female thread and said anti-rotation screw (28) has a corresponding male thread at its head (30).

16. System in accordance with any of claims 1 through 15, characterized by a target device (35) that is detachable with said osteosynthetic plate (1) via at least one clamping section (36).

17. System in accordance with claim 16, characterized in that said target device (35) has target bores (37) that are aligned with the recess in the osteosynthetic plate (1) when said target device (35) is connected to said osteosynthetic plate (1).

18. System in accordance with claim 1, characterized in that said fixation element (2) has a screw head with a self-cutting thread.

19. System for minimally invasive treatment of a fracture of a bone (3), in particular a proximal humeral or femoral fracture, including a support section (12) in the cortical bone or by means of osteosynthetic plate (1) with an additional fastening section (5) to said bone (3), a fixation element (2) for fixing in a fragment of said bone (3) that was dislodged by the fracture, and a guide element (4) that can be fastened via a first connecting section (19) in said support section (12) to said osteosynthetic plate (1) or in the cortical bone and that has a second connecting section (20) for guiding said fixation element (2), whereby said second connecting section (20) of said guide element (4) and said shaft (18) of said fixation element (21) are embodied as anti-tilt and axially displaceable slides, and said system as means for preventing rotation of the bone

fragment at least one anti-rotation screw (28) is arranged in said support section (12) and can be placed in the dislodged fragment of the bone.

20. System in accordance with claim 19, characterized in that said second connecting section (20) of said guide element (4) and said shaft (18) of said fixation element (2) are embodied as a slide such that said shaft (18) of said fixation element (2) is arranged in or about said second connecting section (20).

21. System in accordance with claim 19, characterized in that as a slide bolt said fixation element (2) with a thread on its forward end (16) and said shaft (18) is arranged anti-tilt and axially movable in or about said second connecting section (20).

22. System in accordance with claim 19, characterized in that said shaft of said fixation element (2) is movable in an axially limited manner in or about said second connecting section (20).

23. System in accordance with any of claims 19 through 22, characterized in that said shaft (18) and said second connecting section (20) are embodied in a circular shape such that an axial rotation of said fixation element (2) is possible in or about said guide element (4).

24. System in accordance with claim 19, characterized in that said support section (12) and said guide element (4) are embodied such that a longitudinal axis of said guide element (4) and a tangent to the outside of the cortical bone of the bone (3) are at an angle of between 50° and 70°, in particular between 55° and 65°.

25. System in accordance with claim 19, characterized in that it includes at least one bone splinter fixation element (31) that can be fixed in or to said guide element (4), in particular in a transverse bore (32) provided therein.

26. System in accordance with claim 25, characterized in that a transverse bore (32) is arranged in said guide element (4) such that a longitudinal axis of said longitudinal bone splinter fixation element (31) and a longitudinal axis of said guide element (4) create an angle of between 60° and 100°, in particular between 70° and 90°.

27. System in accordance with claim 19, 25, or 26, characterized in that said bone splinter fixation element (31) is embodied as a screw that has a pressure body with claws (33).

28. System in accordance with claim 19, characterized in that fastening means (23) are provided that hold said guide element (4) axially fast in both directions after placement into said osteosynthetic plate (1) or into the cortical bone.

29. System in accordance with claim 19, characterized in that alignment means are provided that can be used to adjust and/or control the rotational position of said guide element (4) relative to said bone splinter fixation element (31).

30. System in accordance with claim 19, characterized in that said guide element (4) axially has a rotational tool bore (40) for receiving a rotational tool.

31. System in accordance with claim 19, characterized in that said fixation element (2) has a screw head with a self-cutting thread.